

AMENDMENTS TO THE CLAIMS

Claims 1-6 (Canceled).

Claim 7 (Currently Amended): A dental treatment method comprising:
applying an antibacterial composition to teeth and curing or polymerizing said
composition;

wherein said antibacterial composition comprises:

(a) at least one antibacterial salt compound,

(b) at least one acid group-having polymerizable monomer,

(c) at least one hydrophilic polymerizable monomer,

(d) water, and

(e) at least one basic compound selected from the group consisting of an alkali metal
hydroxide, a ~~strong basic acid salt~~ acid salt of a strong base not having an aromatic group,
and primary, secondary or tertiary aliphatic amine;

wherein the tertiary amine is selected from the group consisting of trimethylamine,
triethylamine, N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine,
triethanolamine, N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate,
triethanolamine trimethacrylate and mixtures thereof, and

wherein the pH of said antibacterial composition is between 1.5 and 4.5.

Claim 8 (Previously Presented): The method of Claim 7, wherein the antibacterial
salt compound (a) is an antibacterial pyridinium salt compound.

Claim 9 (Previously Presented): The method of Claim 7, wherein the antibacterial salt compound (a) is a polymerizable group-having antibacterial salt compound.

Claim 10 (Previously Presented): The method of Claim 7, wherein the antibacterial salt compound (a) is an antibacterial pyridinium salt compound having a polymerizable group.

Claim 11 (Previously Presented): The method of Claim 7, wherein (e) is at least one alkali metal hydroxide.

Claim 12 (Previously Presented): The method of Claim 7, wherein (e) is lithium hydroxide, potassium hydroxide or sodium hydroxide.

Claim 13 (Currently Amended): The method of Claim 7, wherein (e) is at least one ~~strong basic acid salt~~ acid salt of a strong base not having an aromatic group.

Claim 14 (Previously Presented): The method of Claim 7, wherein (e) is lithium carbonate, sodium carbonate, potassium carbonate, lithium hydrogencarbonate, potassium hydrogencarbonate, sodium hydrogencarbonate, sodium formate, sodium hydrogen oxalate, sodium acetate, potassium acetate, sodium propionate, sodium borate, sodium dihydrogenphosphite, potassium dihydrogenphosphite, sodium dihydrogenphosphate, potassium dihydrogenphosphate, disodium hydrogenphosphate, or dipotassium hydrogenphosphate.

Claim 15 (Previously Presented): The method of Claim 7, wherein (e) is at least one primary, secondary or tertiary aliphatic amine;

wherein the tertiary amine is selected from the group consisting of trimethylamine, triethylamine, N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine, triethanolamine, N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate, triethanolamine trimethacrylate and mixtures thereof.

Claim 16 (Previously Presented): The method of Claim 7, wherein (e) is at least one primary aliphatic amine.

Claim 17 (Previously Presented): The method of Claim 7, wherein (e) is at least one secondary aliphatic amine.

Claim 18 (Previously Presented): The method of Claim 7, wherein (e) is at least one tertiary aliphatic amine selected from the group consisting of trimethylamine, triethylamine, N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine, and triethanolamine.

Claim 19 (Previously Presented): The method of Claim 7, wherein (e) is at least one compound selected from the group consisting of N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate, and triethanolamine trimethacrylate.

Claim 20 (Canceled).

Claim 21 (Previously Presented): The method of Claim 7, wherein said composition further comprises (f) a polymerization initiator.

Claim 22-24 (Canceled)

Claim 25 (Previously Presented): The method of Claim 7, wherein said composition does not visibly discolor when stored at 50°C for one month.

Claim 26 (Previously Presented): The method of Claim 7, wherein said composition has an adhesiveness to bovine dentin of at least about 15 MPa.

Claim 27 (Canceled)

Claim 28 (Currently Amended): A dental treatment method comprising:
applying an antibacterial composition to a dental bonding material or to a dental restorative material and curing or polymerizing said composition;

wherein said antibacterial composition comprises:

(a) at least one antibacterial salt compound,

(b) at least one acid group-having polymerizable monomer,

(c) at least one hydrophilic polymerizable monomer,

(d) water, and

(e) at least one basic compound selected from the group consisting of an alkali metal hydroxide, a ~~strong basic acid salt~~ acid salt of a strong base not having an aromatic group, and primary, secondary or tertiary aliphatic amine;

wherein the tertiary amine is selected from the group consisting of trimethylamine, triethylamine, N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine, triethanolamine, N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate, triethanolamine trimethacrylate and mixtures thereof, and

wherein the pH of said antibacterial composition is between 1.5 and 4.5.

Claim 29 (Previously Presented): The method of Claim 28, wherein the antibacterial salt compound (a) is an antibacterial pyridinium salt compound.

Claim 30 (Previously Presented): The method of Claim 28, wherein the antibacterial salt compound (a) is a polymerizable group-having antibacterial salt compound.

Claim 31 (Previously Presented): The method of Claim 28, wherein the antibacterial salt compound (a) is an antibacterial pyridinium salt compound having a polymerizable group.

Claim 32 (Previously Presented): The method of Claim 28, wherein (e) is at least one alkali metal hydroxide.

Claim 33 (Previously Presented): The method of Claim 28, wherein (e) is lithium hydroxide, potassium hydroxide or sodium hydroxide.

Claim 34 (Currently Amended): The method of Claim 28, wherein (e) is at least one ~~strong basic acid salt~~ acid salt of a strong base not having an aromatic group.

Claim 35 (Previously Presented): The method of Claim 28, wherein (e) is lithium carbonate, sodium carbonate, potassium carbonate, lithium hydrogencarbonate, potassium hydrogencarbonate, sodium hydrogencarbonate, sodium formate, sodium hydrogen oxalate, sodium acetate, potassium acetate, sodium propionate, sodium borate, sodium dihydrogenphosphite, potassium dihydrogenphosphite, sodium dihydrogenphosphate, potassium dihydrogenphosphate, disodium hydrogenphosphate, or dipotassium hydrogenphosphate.

Claim 36 (Previously Presented): The method of Claim 28, wherein (e) is at least one primary, secondary or tertiary aliphatic amine;

wherein the tertiary amine is selected from the group consisting of trimethylamine, triethylamine, N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine, triethanolamine, N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate, triethanolamine trimethacrylate and mixtures thereof.

Claim 37 (Previously Presented): The method of Claim 28, wherein (e) is at least one primary aliphatic amine.

Claim 38 (Previously Presented): The method of Claim 28, wherein (e) is at least one secondary aliphatic amine.

Claim 39 (Previously Presented): The method of Claim 28, wherein (e) is at least one tertiary aliphatic amine selected from the group consisting of trimethylamine, triethylamine,

N-ethyldiethanolamine, N-n-butyldiethanolamine, N-lauryldiethanolamine, and triethanolamine.

Claim 40 (Previously Presented): The method of Claim 28, wherein (e) is at least one compound selected from the group consisting of N-methyldiethanolamine dimethacrylate, triethanolamine dimethacrylate, and triethanolamine trimethacrylate.

Claim 41 (Previously Presented): The method of Claim 28, wherein said composition further comprises (f) a polymerization initiator.

Claim 42 (Previously Presented): The method of Claim 28, wherein said composition does not visibly discolor when stored at 50°C for one month.

Claim 43 (Previously Presented): The method of Claim 28, wherein said composition has an adhesiveness to bovine dentin of at least about 15 MPa.